

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

Claims 1 - 11 (cancelled).

1 12. (currently amended) A machine for making a
2 nonwoven web comprising successively from top to bottom:
3 a cooling assembly for cooling extruded filaments to
4 form cooled filaments,
5 a drawing assembly with fluid jet devices providing
6 air flow for drawing the cooled filaments, said drawing
7 assembly including a vertical drawing slot having an
8 inlet opening, an outlet opening and a constant
9 horizontal cross-section through which filaments pass
10 with air to form a laterally extending curtain of drawn
11 filaments, said drawing slot being formed by laterally
12 extending spaced-apart walls terminating at the outlet
13 opening and being free of setbacks adjacent the outlet
14 opening, said drawing slot having a sufficient lateral
15 extent to receive said curtain of drawn filaments, which
16 pass therethrough with air to form drawn filaments,
17 a diffuser having an inlet zone formed by a
18 convergent nozzle and a divergent nozzle connected to
19 said convergent nozzle including a diffuser inlet opening
20 having a sufficient lateral extent to receive said
21 curtain of drawn filaments and being connected to a

22 diffuser outlet zone including a diffuser outlet opening,
23 said diffuser including a divergent nozzle and an
24 electrostatically charging rail for opening drawn
25 filaments which pass therethrough into to form opened
26 filaments, said divergent nozzle being formed by fixed
27 diverging walls terminating at said diffuser outlet
28 opening, and

29 ~~a rail for electrostatically charging said opened~~
30 ~~filaments to form charged filaments, and~~
31 a receiving belt for receiving said charged opened
32 filaments, said diffuser outlet opening being spaced from
33 said belt to form a receiving belt spacing,

34 ~~wherein a an air flow slot is formed between the~~
35 ~~drawing assembly outlet opening and the diffuser inlet~~
36 ~~opening for delivery of a flow of air onto said filaments~~
37 ~~along the entire lateral extents of the openings, said~~
38 ~~air flow slot opening to ambient air for intake of air by~~
39 a venturi effect produced in the divergent nozzle by air
40 passing therethrough with said drawn filaments, and
41 said receiving belt spacing being open to the
42 ambient air

43 ~~said convergent and divergent nozzles slow the~~
44 ~~passing filaments to enhance spreading of the filaments~~
45 ~~by said electrostatically charging and thereby~~
46 ~~cooperatively obtain an improved spreading of the~~
47 ~~filaments and a reduced rebound phenomena of filaments on~~
48 ~~said receiving belt.~~

1 13. (currently amended) The machine of claim 12,
2 wherein ~~said drawing assembly includes a drawing slot~~
3 ~~outlet from which the drawn filaments are emitted, said~~
4 ~~drawn filaments being received in said diffuser inlet~~
5 ~~zone, and said air flow slot delivers said flow of air at~~
6 ~~said drawing slot outlet opening to reduce the air speed~~
7 and the speed of the passing filaments.

1 14. (currently amended) The machine of claim 13,
2 wherein a second air flow slot remote of said first-
3 mentioned air flow slot extends through said diffuser and
4 opens into said divergent nozzle for injection therein of
5 air by venturi effect produced in the divergent nozzle by
6 air passing therethrough with said drawn filaments.

1 15. (currently amended) The machine of claim 14,
2 wherein said air flow slots take in air by venturi effect
3 only.

1 16. (previously presented) The machine of claim 15,
2 wherein said rail is located between said divergent
3 nozzle and said receiving belt.

1 17. (previously presented) The machine of claim 12,
2 wherein said rail is located upstream from said divergent
3 nozzle.

1 18. (previously presented) The machine of claim 17,
2 wherein said convergent and divergent nozzles are
3 connected by a rectilinear slot.

1 19. (previously presented) The machine of claim 18,
2 wherein said rail is located in said rectilinear slot.

1 20. (previously presented) A machine for making a
2 nonwoven web comprising:

3 a drawing assembly for drawing filaments which pass
4 therethrough with air to form drawn filaments,

5 a diffuser having an inlet zone formed by a
6 convergent nozzle and a divergent nozzle connected to
7 said convergent nozzle for opening drawn filaments which
8 pass therethrough into opened filaments,

9 a rail for electrostatically charging said opened
10 filaments to form charged filaments, and

11 a receiving belt for receiving said charged
12 filaments,

13 wherein a slot is formed in the divergent nozzle for
14 delivery of a flow of air onto said filaments, said slot
15 opening to ambient air for intake of air by a venturi
16 effect produced in the divergent nozzle by air passing
17 therethrough with said drawn filaments, and

18 said convergent and divergent nozzles slow the
19 passing filaments to enhance spreading of the filaments
20 by said electrostatically charging and thereby
21 cooperatively obtain an improved spreading of the

22 filaments and a reduced rebound phenomena of filaments on
23 said receiving belt.

1 21. (previously presented) The machine of claim 20,
2 wherein a second slot remote of said first-mentioned slot
3 is formed between said drawing assembly and said diffuser
4 for delivery of a flow of air into said filaments, said
5 slots opening to the ambient air for intake of air by a
6 venturi effect produced in the divergent nozzle by air
7 passing therethrough with said drawn filaments.

1 22. (previously presented) The machine of claim 21,
2 wherein said drawing assembly includes a drawing slot
3 outlet from which the drawn filaments are emitted, said
4 drawn filaments being received in said diffuser inlet
5 zone, and said second slot delivers said flow of air at
6 said drawing slot outlet to reduce the air speed and the
7 speed of the passing filaments.

1 23. (previously presented) The machine of claim 22,
2 wherein said slots take in air by venturi effect only.

1 24. (previously presented) The machine of claim 21,
2 wherein said rail is located between said divergent
3 nozzle and said receiving belt.

25. (cancelled).

1 26. (new) A machine for making a nonwoven web
2 comprising successively from top to bottom:
3 a cooling assembly for cooling extruded filaments to
4 form cooled filaments,
5 a drawing assembly with fluid jet devices providing
6 air flow for drawing the cooled filaments, said drawing
7 assembly including a vertical drawing slot having an
8 inlet opening and an outlet opening through which
9 filaments pass with air to form a laterally extending
10 curtain of drawn filaments, said drawing slot being
11 formed by laterally extending spaced-apart walls
12 terminating at the outlet opening and being free of
13 setbacks adjacent the outlet opening, said drawing slot
14 having a sufficient lateral extent to receive said
15 curtain of drawn filaments,
16 a diffuser having an inlet zone including a diffuser
17 inlet opening having a sufficient lateral extent to
18 receive said curtain of drawn filaments and being
19 connected to a diffuser outlet zone including a diffuser
20 outlet opening, said diffuser including a divergent
21 nozzle and an electrostatically charging rail for opening
22 drawn filaments which pass therethrough to form opened
23 filaments, said divergent nozzle being formed by
24 diverging walls terminating at said diffuser outlet
25 opening, and
26 a receiving belt for receiving said opened
27 filaments, said diffuser outlet opening being spaced from
28 said belt to form a receiving belt spacing,

29 wherein an air flow slot is formed between the
30 drawing assembly outlet opening and the diffuser inlet
31 opening for delivery of a flow of air onto said filaments
32 along the entire lateral extents of the openings, said
33 air flow slot opening to ambient air for intake of air by
34 a venturi effect produced in the divergent nozzle by air
35 passing therethrough with said drawn filaments, and
36 said receiving belt spacing being open to the
37 ambient air.